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THE MONTHLY NEWSLETTER FOR ENERGY MANAGERS AND PUBLIC AFFAIRS OFFICERS

Issue 3

Message to Energy Managers

As Earth Day approaches, we feature an example of energy awareness events at NSGA Sugar Grove. Their Energy Awareness week strives to educate children as well as adults on the importance of energy conservation.

We feature two construction projects: Naval Air Station, North Island, CA is building twin covered parking PV installations, topped by a 750 kW solar array; and Patuxent River NAS, Maryland is renovating their facility to reduce costs and improve energy efficiency. The upgrades will also eliminate discharges of cooling water in to the Chesapeake Bay.

We also highlight two SECNAV winners in this issue: USS BOXER (LHD-4) in the Large Ship Category, and USS TAYLOR (FFG-50) in the Small Ship Category. USS BOXER reduced its fuel consumption by nearly 15,000 barrels, using only 54% of its allotted fuel. USS TAYLOR reduced its fuel consumption by more than 4,000 barrels, saving \$107,000.

And check out the upcoming energy meetings and conferences designed for energy managers.

Children Enjoy Energy Week in West Virginia

Every year for energy week NSGA Sugar Grove raises awareness of the importance to conserve energy, and not just with adults. In a continued effort to foster strengthened community relations, the Naval Base sponsored a coloring and poster contest for the children of Pendleton County.



The contestants came from Brandywine, Franklin and North Fork County Elementary Schools. Home-schooled children and all children of NSGA employees were also invited to participate.

The coloring contests were divided into three categories: preschool/kindergarten, first/second, and third/fourth grades. A Sugar Grove Petty Officer developed posters for each of the groups with progressive difficulty of coloring. Children in the fifth/sixth grade group developed their own posters.

The Petty Officer and some of his co-workers judged the completed posters. Each winner received a NSGA Energy Awareness t-shirt and other prizes. The Command Energy Coordinator, and a Lieutenant presented the prizes to the local school children at their schools.

The first stop was Brandywine Elementary, where seven students were recognized. Despite the prizes, the children were more impressed by the lightning bug on the T-shirt. All were eager to proudly wear their shirt for the group picture.

The second school, Franklin Elementary, had two contest winners. Jessica Judy, was the first prize winner in the fifth and sixth grade

category. Her mother, a volunteer at the school said, "She is having a great week! She was recognized as an honor student earlier this week and now this!"

At North Fork Elementary School in Circleville, four students happily accepted their prizes and shirts, which they quickly donned—backwards, preferring the large-scale



Contestants during NSGA's Energy Week

bug on the back to the little one on the front. All of the children were anxious to hear the contest results and fascinated to see a military woman—the Lieutenant—in her uniform. Posters were given to all schools for display and every student received energy awareness stickers and information booklets.

DON Energy Awareness Website: Access the tools on the Navy Energy website for ideas, planning tips, and tools. Set your browser to <<http://energy.navy.mil>> and scroll down the left-hand column to the Awareness pick.

North Island Big PV Array

Naval Air Station, North Island, CA will soon be home to what may be the largest covered parking PV installation in the world.

Twin parking structures topped by a 750 kW solar array will cover an 81,000 square foot existing parking area serving long term deployed military personnel.

Navy Region Southwest (NRSW) contractor NORESO is undertaking design and construction of the facility under an Energy Savings Performance Contract (ESPC). Construction is to begin soon and be completed this August.

In October 2000, the ESPC was established under the Department of Energy (DOE) Western Region ESPC Contract. As of October 2001, three Delivery Orders have been awarded resulting in nine Energy Conservation Measures (ECMs) being implemented at four region bases. The nine ECMs are estimated to save over \$2.4 million annually at a financed cost of just over \$24 million. ECMs range from base-wide lighting and irrigation water projects, Direct

Digital Control (DDC), microturbine and HVAC retrofit projects, to small and large-scale renewable projects.

The PV project at North Island, NRSW says, is an outgrowth of California's energy difficulties.

According to NRSW, the impact of the California energy crisis resulted in substantial renewable rebates and incentives offered by the California Public Utilities Commission and additional Office of the Secretary of Defense (OSD) project buy-down funds. These totaled nearly \$5 million for the PV project alone, with expected payback in seven years.



The second delivery order consisted of five ECMs including the PV project at a cost of \$13.8 million. After paying off the contractor's investment these will provide the Navy life cycle savings of \$11.7 million and will save about 17 billion Btu/yr. With all rebates and incentives applied, these ECMs will provide simple payback of 5.8 years and financed term of ten years.

Upgrades at Patuxent River Naval Air Station

Patuxent River NAS, Maryland, is undergoing a \$6 million renovation to reduce costs and improve energy efficiency. The upgrades, due to be completed this spring, will save the station more than \$300,000 annually.

The Naval Air Station houses the U.S. Naval Air Systems Command, Naval Air Warfare Center Aircraft Division and approximately 50 tenant activities, and includes 935 buildings hosting more than 18,000 people.

The upgrades will reduce energy usage and eliminate cooling water discharges into the Chesapeake Bay. Maryland authorities recently determined that the discharges hurt the bay's water quality.

Patuxent River is working with Alliant Integrated Services—Cogenex and its partner, Co-Energy Group, L.L.C. The work is being performed under the Department of Energy's Geothermal Technology Specific Super Energy Savings Performance Contract.

According to the Energy Manager, "This is the Navy's first Super Energy Saving Performance Contract (SESPC) under the guidance of the Department of Energy (DOE). The SESPC allows the Navy to obtain new equipment at nine buildings with no up-front funding and pay the contractor for the project over the ten-year payback period with savings obtained between the operating cost differences."

The project includes 125 new geothermal heat pumps to replace existing conventional heating and cooling systems in buildings on the base.

Other components of the Patuxent River Naval Air Station project include heating, ventilating and air conditioning improvements, installation of energy management systems, and upgrades to lighting systems.

Using a PowerDOE software model to enter energy information for each building to create before and after energy usage and savings information, the project is expected to provide annual savings of \$98,728 in electricity, \$122,455 in natural gas, \$6,676 in fuel oil, and \$79,860 in potable water.

For more information, call (301)757-6748.

Don't Forget Earth Day!

"Building a sustainable society is the critical challenge of this century. Everything depends on it. Since sustainability is everyone's concern, we should all be actively involved, particularly the youth of America who will inherit whatever environment we leave behind."

— Sen. Gaylord Nelson, Founder, Earth Day

On 22 April, America will mark its 32nd Earth Day. Organizations of all kinds will use the occasion to step up environmental programs, tout their progress, and raise awareness about the need to conserve, to create a more sustainable America.

What will you do to mark Earth Day? In the past, DON activities like yours have conducted energy awareness programs of all kinds. We hope you're planning likewise this year. Energy Managers will be receiving some help from the DON. Look for a shipment in late March. Let us know if you have had any address changes.

For those who write articles for base newsletters, or those who desire more information, a short history of Earth Day can be found at <http://www.earthday.wilderness.org/history/index.htm>

BOXER and TAYLOR Believe in, Act to Conserve Energy

This past autumn, San Diego-based USS BOXER and Mayport, Florida-based USS TAYLOR joined the ranks of ships that have been honored by the Navy for reducing energy consumption. Each ship's energy team was honored with SECNAV energy awards for leadership and commitment to comprehensive energy efficiency program implementation and effectiveness. Their programs are viewed by DON as success stories that can be replicated by Navy vessels worldwide.

USS BOXER

USS BOXER reduced its fuel consumption by nearly 15,000 barrels in FY00 compared to FY85, saving more than \$372,000. The ship consumed only 54% of its allotted fuel through its dedication to fuel conservation, developing three innovative engineering plant configurations designed to optimize fuel efficiency based on operational requirements and transit speeds.

"Although, energy conservation at sea is a challenge in view of unpredictable and dynamic mission, speed, and equipment operational requirements, a dedicated effort by all hands can result in significant savings," said USS BOXER's Commanding Officer.

USS BOXER implemented a wide range of comprehensive energy-saving practices in propulsion systems, HVAC,



USS BOXER



refrigeration, electrical load, steam pipes and valves, potable water, and electronic boiler management. USS BOXER stepped up hull inspections and cleanings, improved fuel efficiency, and conducted thorough energy awareness education of personnel, which led to further energy savings.

USS TAYLOR

USS TAYLOR reduced its fuel consumption in FY00 by more than 4,000 barrels, saving \$107,000. Total projected savings through 2010 are \$2.5 million. The ship implemented close conservation-oriented coordination between Navigation and Engineering departments to devise the most fuel and cost-effective

transits.

USS TAYLOR implemented a comprehensive program to cut energy consumption and prevent pollution by increasing the efficiency of its propulsion systems, monitoring and closely managing its air conditioning, avoiding lighting unused spaces and running unneeded equipment, maintaining an aggressive program of hull cleanings, and other endeavors. It also reduced its water consumption, recycled helicopter fuel, found uses for waste heat, and implemented a thorough energy awareness program for ship personnel.



USS TAYLOR

Energy Training 2002

CECOS Facilities Energy Management course

This five-day course provides students with fundamental energy management guidance. It is geared to energy managers at the activity level, providing a non-technical approach to energy management, overviews of energy management, networking opportunities, ideas on how to achieve energy conservation goals, and much more. The course provides entry level energy managers with a strong foundation in a non-technical approach, and gives experienced managers fresh ideas to take back into the field. This course is a first step towards meeting the goals of the Energy Policy Act.

The course is given regionally each year; remaining dates for FY02:

22-26 April Pacific Region Offering, Japan, exact location TBA

20-24 May Southern Region Offering, Tampa, FL

9-13 Sept. Atlantic/North Atlantic Regional Offering, exact location TBA.

CECOS will cover your travel costs and per diem; there is no tuition fee. If you are interested in attending, either visit the CECOS web site at <https://www.cecoss.navy.mil> and register electronically or you can contact the course coordinator, at DSN 551-4245 or commercial at (805)982-4245; or e-mail him directly at siqueidogr@cecoss.navy.mil.

Check It Out



All Together Now ...

Upcoming meetings of possible use to DON energy managers and senior energy personnel:

Facility Forum 2002, 21-24 April, San Diego, exhibits and conferences on building efficiency, applied management, technology and equipment, etc., organizer Facility Forum, info: Denese Jones, 972-753-0366.

Project Management, 22-24 April, Baltimore, MD, \$1,445, sponsored by American Institute of Chemical Engineers, for those directly involved in capital project development and execution, info: 800-242-4363.

Interconnecting Distributed Generation to Utility Distribution Systems, 06-08 May, Madison, WI, \$1,195, how to design the protective relay system, specify interconnection devices, etc., conducted by University of Wisconsin-Madison College of Engineering, info: 800-462-0876.

Fundamentals of Energy Management, 13-14 May, Atlantic City, NJ, \$985, intensive seminar designed as prep for the CEM exam (offered day following course), organized by Association of Energy Engineers, info: 770-925-9633.

2002 Energy, 02-05 June, Palm Springs, CA, workshop and expo for energy managers, workshop organized by Pentagon Energy Office and sponsored by US Department of Energy & FEMP, co-sponsored by DoD and GSA, info and registration, 800-395-8574 or www.energy2002.ee.doe.gov

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Watts News?

We want to hear from you.

Tell us about the energy initiatives you're working on, the problems you encounter, and the solutions you discover.

Submit article ideas, comments, or questions to:

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